This is Dr. Sherman Hom and I am the Director of Regulatory Affairs for Medicinal Genomics.

Over the last four years, I have submitted public comments to every US jurisdiction and 70% of them have fully or partially modified their microbial compliance testing program to include specific human pathogens and remove the total count tests.

Both bills state that microbial testing for both cannabis programs must test for "**Dangerous yeasts, molds and mildew"** and **Harmful microbes**.

I have already shared our first recommendation to add four Aspergillus human pathogens, (A. flavus, A. fumigatus, A. niger, and A. terreus).

Our second recommendation is to remove counting aerobic bacteria, yeast and mold, Enterobacteriaceae, and coliforms. Your enumeration tests were from the American Herbal Pharmacopoeia's 2014 Cannabis Monograph. Their guidelines stated that enumeration tests **should not** be used to fail cannabis samples simply for exceeding action levels. Moreover, these total count tests prevent cultivators from using microbiological pesticides and they must use harmful chemical ones. We have a dataset of 35 microbial pesticides that control bacterial and fungal plant pathogens, as well as insect and nematode infestations. These microbial pesticides have been approved by at least one state for cannabis cultivation.

Our third recommendation concerns allowable methods, which must be AOAC's certified Performance Tested Methods that have an enrichment step and have been validated by a cannabis testing laboratory using cannabis samples.

Our fourth recommendation is to require the test sample size to 10 grams from the usual 1 gram, because Maine's maximum batch size for sampling to transport to the testing laboratory is 22 lbs.

Our fifth recommendation is in the future to add the 9 additional dangerous molds that are found in cannabis flowers identified via cannabis tissue microbiomes. Six tests can detect the presence of 15 dangerous bacteria and molds within 36 hours.

Detailed reasons supporting all of our recommendations are included in my written testimony.

Instead of a secret shopper program, we favor the use of a proficiency testing program based on cannabis samples.

Lastly, I propose that your committee discuss the use of a less expensive track and trace system based on DNA fingerprinting to combat the diversion into the illicit market. For example, we studied a small sample of THCA hemp products that are not tested and showed that many of the products were actually sourced from one hemp strain probably supplied by one cultivator.

I support these bills.

Sherman Hom
Beverly
LD 1847
This is my oral testimony on 1847 and 104